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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/099,654	03/15/2002	Douglas B. Buchanan	318 P002	2980

7590 08/11/2004

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EXAMINER

PASSANITI, SEBASTIANO

ART UNIT PAPER NUMBER

3711

DATE MAILED: 08/11/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 10/099,654	<b>Applicant(s)</b> BUCHANAN, DOUGLAS B.	
	<b>Examiner</b> Sebastiano Passaniti	<b>Art Unit</b> 3711	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on see detailed Office action.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-3,5-9, 12,14-16 and 18 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,5-9, 12,14-16 and 18 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>07/06/04</u> . | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

This Office action is responsive to communication received 07/06/2004 – Request for continued examination (RCE).

The amendment filed after final rejection and received 03/30/2004, has now been entered.

Claims 1-3, 5-9, 12, 14-16 and 18 remain pending.

Following is an action on the MERITS:

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1-3, 5-9, 12, 14-16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Swash in view of Chang, Yoshida (JP 08-229169) and the Rules of Golf as set forth by the USGA.

As to claims 1-3, the patent to Swash differs from the claimed invention in that Swash does not show a groove depth being of micron size. Instead, Swash indicates that the groove depth is preferably shallow on the order of 0.2 to 0.3 mm, and more preferably 0.25mm. However, Swash also indicates that the depth of the grooves may be more or less. Clearly, it would appear that the only limiting factor for the skilled artisan in determining groove depth is the specific dimension that is stipulated by the USGA for maximum groove depth. The USGA states that the face of a club head “may” be provided with grooves and that the groove depth shall not exceed 0.5mm (0.020 in.).

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That is to say, the face may be entirely void of grooves, or include grooves with a maximum depth of 0.5mm. With that in mind, the skilled artisan further finds from a reading of Chang that omission of grooves is desirable in that without face grooves, the friction between a golf ball and the impact surface is minimized to reduce the spin rate of a struck ball. See col. 1, line 53 through col. 2, line 15 in Chang. In addition, Chang indicates that the selective placement of grooves on the face portion enhances the aesthetic value of the club. So long as the grooves provided are so very small in size, i.e., micron in size, there is no undesirable effect noticed by including these grooves as compared to a smooth face. See col. 8, lines 7-62 in Chang. In Chang the groove depth may be as small as 0.002 inch (0.05 mm). Moreover, Chang indicates that the groove pattern may take any convenient shape and/or form. Yoshida is introduced to further reinforce the concept that the use of micron size grooves is well known in the art. Note the translation attached to Yoshida, which indicates that the pitch of the grooves is set between 0.1–0.9 mm. In view of the patents to Chang, Yoshida and the Rules of Golf, one may conclude that shaping the grooves with a depth dimension between 0.0mm (no grooves) and 0.5 mm (the maximum allowed by the USGA) will directly impact the response of a golf ball at impact. Moreover, Chang guides the skilled artisan to form groove patterns in other than conventional patterns. Thus, the Chang teaching obviates the applicant's claim to "non-concentric" groove patterns of constant radius. The combination of the Swash, Chang and Yoshida teachings indicates recognition that the existence of grooves and the groove depth directly affect the characteristics of a struck ball. In other words, the groove dimensions are recognized as being result-

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effective. Where a parameter is identified as being result-effective, the optimization of that parameter is normally considered an obvious matter to one having ordinary skill in the art. See In re Antonie, 559 F.2d 618, 195 USPQ 6 (CCPA 1977); In re Aller, 220 F.2d 454, 105 USPQ 233 (CCPA 1955). Under the circumstances here, the applicant's claimed dimensions involve no more than the optimization of a result-effective variable and would have been obvious to one having ordinary skill in the art, based on the teachings of Swash, Chang and Yoshida.

As to claims 5-9, 12, 14-16 and 18, Swash lacks a suggestion that the grooves are formed on an insert that in turn is inserted into the face portion of a club head. Chang shows it to be old in the art to provide the face of a club head with grooves that are directly introduced into the face of the club head, as shown in Figure 6, or that are part of an insert that is subsequently attached to the face portion, as shown in Figure 4. In view of the patent to Chang, it would have been obvious to modify the device in the cited art reference to Swash by attaching a separate face plate to the club head as an alternative to forming the grooves directly upon the surface of the striking face, the motivation being to simply provide another convenient manner of incorporating grooves within the face portion of the club head. Concerning the applicant's requirement in claim 6 that a clearance be provided in the instance where an insert is secured to the face of a club head, it is clear that while the references do not specifically discuss a clearance, it is clear the inclusion of a clearance and the amount of clearance would have depended on the sizing requirements for the insert and the manner in which the insert is secured to the face of the head. For instance, a press-fitting arrangement

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between the insert and the face would clearly call for much less clearance or space than would an arrangement in which the insert is secured to the face via screws, bolts, or even a dovetail fit. As to claims 7-9, the fact that the applicant requires that the insert be made from cast or bar stock material does not patentably distinguish over the prior art teachings. The skilled artisan, aware of the plethora of materials available in the golf art and familiar with the various processes of manufacturing club heads and the specific materials suitable for each one of these processes, would have found it obvious to select an appropriate material from which to make the club head. See In re Hopkins, 145 USPQ 140.

#### RESPONSE TO ARGUMENTS

In the remarks received 03/30/2004, it is noted that applicant's arguments center around the alleged non-analogous nature of the Rules of Golf relied upon in rejecting the claims. Moreover, the applicant argues that the constant radius nature of the markings on the striking face is critical for presenting the same configuration to the golf ball as the golf ball moves with respect to the face during a putting stroke.

In response to these arguments, it is noted that the Rules of Golf clearly provide the skilled artisan with an originating blueprint for the design of club heads. The Rules of Golf are clearly within the field of endeavor of the applicant. 35 USC §103 presumes full knowledge by the inventor of all the prior art in the field of his endeavor. Stated another way, The Rules of "Golf" must most certainly be analogous to the "golf" art. Further, note that the Rules of Golf have been used in combination with other prior art

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references. It is the combination of this prior art that renders the claims obvious.

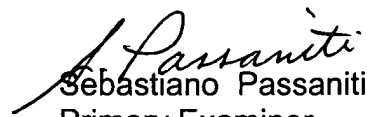
Applicant, however, appears to be separately attacking the references.

Regarding the configuration of the markings, the applicant's attention is directed to the newly cited reference to Chang, used in the rejection, *supra*. Chang indicates that the groove patterns may include any desired pattern comprising any combination of lines or dots (col. 8, lines 38-50). It would appear that so long as the groove pattern remains of micron size, the more specific pattern of lines on the face is not critical.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sebastiano Passaniti whose telephone number is 703-308-1006. The examiner can normally be reached on Mon-Fri (6:30-3:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Greg Vidovich can be reached on 703-308-1513. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
Sebastiano Passaniti  
Primary Examiner  
Art Unit 3711

S.Passaniti/sp  
August 9, 2004